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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,716	03/16/2004	Katsumasa Hijikata	2004-0416A	1033

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EXAMINER	
SHINGLETON, MICHAEL B	

ART UNIT	PAPER NUMBER
2815	

MAIL DATE	DELIVERY MODE
06/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/800,716	HIJIKATA ET AL.	
	Examiner	Art Unit	
	Michael B. Shingleton	2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,5,16,19,20,22 and 24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4, 5, 16, 19, 20, 22 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4, 5, 16, 19, 20, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. US 5,280,641 (Ishii).

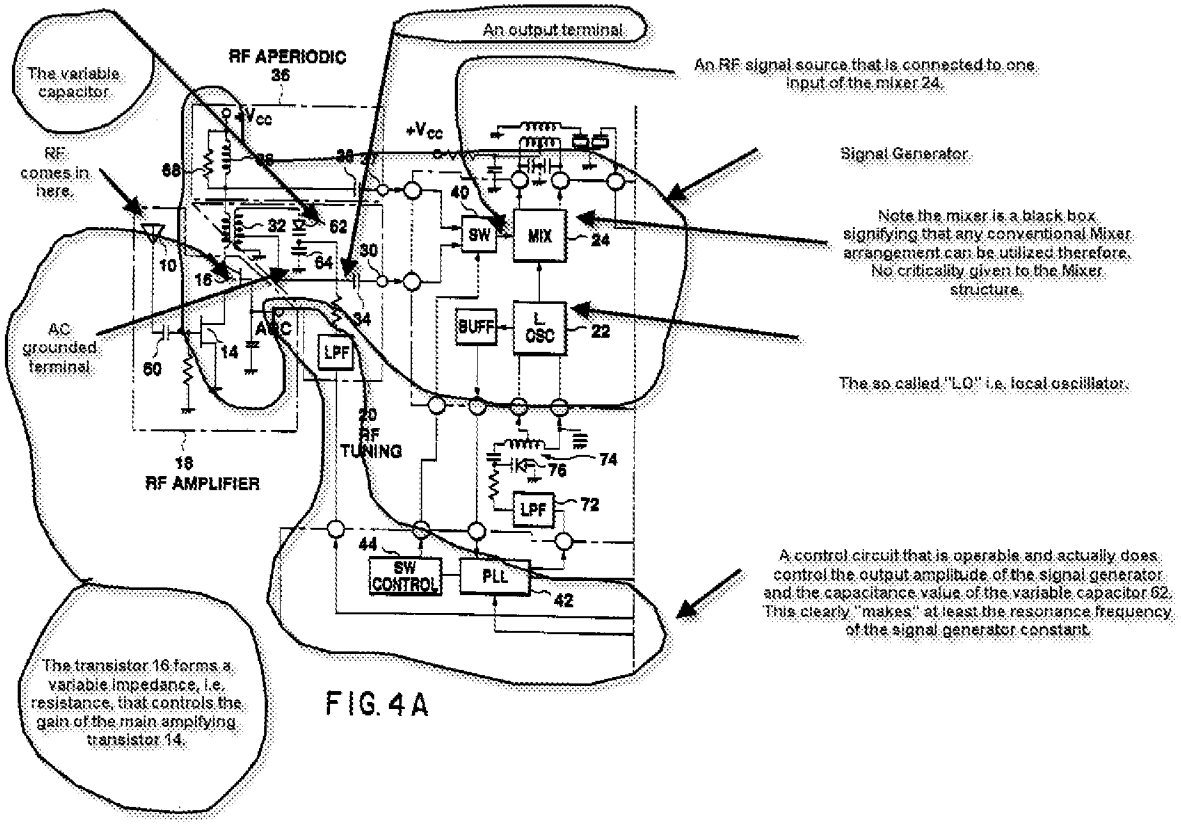

FIG. 4A

Figure 4A of Ishii

Figure 4A and the relevant text of Ishii discloses a variable gain amplification circuit having a signal generator (gain variable signal generator) as indicated above whereby element 16 forms a variable resistor element that is also part of the load for the source/drain of the main amplifying transistor 14. Also the resistor 68 is shown in Ishii as a load for the amplifier or signal generator and while this element is shown as a non-adjustable element to make an element adjustable has long been held as "not a patentable advance", i.e. it would have been obvious to one of ordinary skill in the art. See In re Stevens, 101 USPQ 284 (CCPA 1954). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the element 68 adjustable so as to allow for the tuning of the circuit so as to select the optimum or workable range for the device as is known in the art and as is within routine skill. Element 62 is a variable capacitor that is connected between the output terminal, i.e. the tap on secondary 32 and an AC ground, i.e. note the ground symbol. As indicated in the above the circuitry that provides the control signal for the variable capacitor and the AGC signal forms the claimed control circuit. The signal applied to the variable capacitor 62 can be called part of the "gain setting". The control signal V_T for the variable capacitor clearly controls the capacitance value of the variable capacitor 62. The claims now recite, i.e. have been amended to recite that the capacitance *makes* either the cutoff frequency or the resonance frequency of the signal generator constant. This is what happens in Ishii. Note that although the signal V_T may vary for a short period the value the signal does settle down to a single value and remains there till the tuning point is changed thereby making the resonance frequency of the signal generator constant that also corresponds to the maximum point of signal strength.

Some of the claims recite that the RF signal source has a "signal band", i.e. bandwidth??? equal to or larger than 100MHz. Ishii is silent on this particular bandwidth setting. However, selecting the values and quality of the passive elements like the capacitor is merely the discovery of the workable range for the circuit of Ishii. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the values of the circuit elements in Ishii to achieve a 100MHz or greater bandwidth, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105, USPQ 233.

The signal generator of Ishii also includes a Mixer 24 but Ishii is silent on the details of the construction of the mixer itself. Also Ishii includes a Local Oscillator 22, i.e. "LO"??? It is well known that one art recognized equivalent form of mixer is on one that has a variable gain. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the mixer 24 of Ishii with one that has a variable gain because as the Ishii reference is silent on the exact details of the construction of the mixer 24 one of ordinary skill in the art would have been motivated to use any art-recognized equivalent mixer such as a variable gain mixer.

With respect to the art recognized equivalent forms of variable resistor and capacitor elements. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the resistor and capacitor elements of the Ishii reference with these art recognized equivalent forms of resistors and capacitors as set forth by the claims because these are art recognized equivalents. These would work as expected and no unexpected results would occur from using one art-recognized equivalent element over another. Most anyone in Electrical Engineering school has used these switched boxed variable capacitor and variable resistor element for a variable resistor and/or variable capacitor in an electronic circuit.

Applicant's arguments with respect to claims of record have been considered but are moot in view of the new ground(s) of rejection. However the following remarks are given. The signal generator is now given the name "gain variable signal generator" yet not further limiting structure is recited. Thus in the above rejection applicant should refer the signal generator as the gain variable signal generator. Applicant has also deleted the functional phrase to make the cutoff frequency of the signal generator constant and has added that the capacitance value of the variable capacitance is controlled according to a gain setting of said variable signal generator. What structure is a "gain setting"? Plus as indicated one can drawn a line around circuitry that is used to meet the broad limitation of control circuit. Again no specific limiting structure is recited. The signal applied to the variable capacitor 62 can be called part of the "gain setting". The examiner must give the broadest reasonable interpretation to the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is (571) 272-1770.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker, can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MBS
April 20, 2007
June 19, 2008
January 20, 2009
June 17, 2009

/Michael B Shingleton/
Michael B Shingleton
Primary Examiner
Group Art Unit 2815